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Having thus described our invention, what we claim is:

1. In an automatic phonograph having a compact disc player adapted to read from a compact disc encoded information as to the starting time, ending time and elapsed playing time of each selection on the disc, apparatus including means  
5 responsive to the starting time of a selection for generating a real elapsed time signal, means for comparing said real elapsed time signal with an apparent elapsed time signal read from said disc and means responsive to said comparing means for recording a skip when the difference between said real elapsed time signal and said apparent elapsed time signal corresponds to a time which is greater than a  
10 predetermined time.
2. Apparatus as in Claim 1 including means for cancelling a selection when the difference between said real elapsed time signal and said apparent elapsed time signal corresponds to a second predetermined time which is greater than said first-named predetermined time.
- 15 3. Apparatus as in Claim 1 including means responsive to said recording means for cancelling a selection when the number of said skips exceeds a predetermined number.
4. Apparatus as in Claim 1 including first means for cancelling a selection when said real time elapsed signal differs from said apparent elapsed time signal by an  
20 amount corresponding to a second predetermined time which is greater than said first-named predetermined time, means for recording the number of said skips and means responsive to said recording means for cancelling a selection when the number of skips exceeds a predetermined number.
5. Apparatus as in Claim 4 including means for changing said predetermined  
25 times and said predetermined number.
6. Apparatus as in Claim 4 in which said phonograph is adapted to play selections from tracks of a number of discs, said recording means recording the disc and track number corresponding to said skips and cancellations and means for reading the stored information.
- 30 7. Apparatus as in Claim 6 in which said information storing means is adapted to store the time of occurrence of the last skip and the time of occurrence of the last cancellation of a selection.
8. In an automatic phonograph for playing selections from a plurality of compact discs on a disc player adapted to read from a compact disc encoded information as to

- the starting time, ending time and elapsed playing time of each selection on a disc, apparatus including means responsive to the starting time of a selection for generating a real elapsed time signal, means for comparing said real elapsed time signal with an apparent elapsed time signal read from said disc, means responsive to said comparing
- 5 means for recording a skip for the selection being played when the difference between said real elapsed time signal and said apparent elapsed time signal corresponds to a time which is greater than a first predetermined time, means responsive to said skip recording means for cancelling a selection when the number of skips recorded therefor exceeds a predetermined number, means for cancelling the selection being
- 10 played when the difference between the real elapsed time signal and the apparent elapsed time signal corresponds to a second predetermined time which is greater than the first predetermined time, means for recording the number of cancellations for each selection and means for providing a visible display of the identity of a selection and the number of skips and cancellations recorded for each selection.
- 15 9. Apparatus as in Claim 8 including means for changing said predetermined times and said predetermined number.
10. In an automatic phonograph adapted to play a plurality of selections and to be turned on and off, apparatus including means for making selections from among said plurality, means for registering selections which have been made, means for erasing
- 20 from said registering means selections as they are played and means responsive to the passage of a predetermined time interval after said phonograph has been turned off for erasing from said registering means selections which have been made but not yet played.
11. Apparatus as in Claim 10 including means for setting said time interval.
- 25 12. An automatic phonograph including in combination means for storing a plurality of recordings, means for playing said recordings, user-operated selected means adapted to be enabled to permit a user to select recordings to be played by said playing means, money-responsive means normally enabling said selecting means independently of said money responsive means, and means for setting said settable
- 30 means to permit a user free plays at predetermined times.
13. An automatic phonograph as in Claim 12 in which said setting means is adapted to set said settable means for time of the day and days of the week.
14. An automatic phonograph as in Claim 13 in which said setting means comprises a real time clock.

15. An automatic phonograph including in combination means for storing a plurality of recordings, means for playing said recordings, user-operated selecting means adapted to be enabled to permit a user to select recordings to be played by said playing means, money-responsive means normally enabling said selecting means,  
5 automatic means adapted to be activated to cause said playing means to play recordings independently of said selecting means and said money-responsive means, and means for activating said automatic means for a predetermined limited period of time.
16. An automatic phonograph as in Claim 15 in which said activating means is  
10 adapted to activate said automatic means for predetermined hours of predetermined days of the week.
17. An automatic phonograph as in Claim 15 including means for programming said automatic means to play predetermined recordings.
18. An automatic phonograph including in combination means for storing a  
15 plurality of recordings, means for playing said recordings, user-operated selecting means adapted to be enabled to permit a user to select recordings to be played by said playing means, money-responsive means normally enabling said selecting means, settable means for enabling said selecting means independently of said money responsive means, means for setting said settable means to permit a user free plays at  
20 predetermined times, automatic means adapted to be activated to cause said playing means to play recordings independently of said selecting means and said money-responsive means and means for activating said automatic means for a predetermined limited period of time.
19. An automatic phonograph as in Claim 17 in which said setting means and said  
25 activating means comprise a common real time clock.
20. An automatic compact disc phonograph including in combination, means for storing a plurality of compact discs having selections recorded in the various tracks thereof, a player for playing said discs, means for selecting a disc to be played by said player, means for recording the number of times a selected disc could not be read by  
30 the player together with the identity of the disc and means for reading said recording means.
21. An automatic compact disc player as in Claim 20 including means for recording the time of occurrence of the last failure of a particular disc to be read by said player.

22. An automatic compact disc phonograph including in combination, means for storing a plurality of compact discs having selection recorded in the various tracks thereof, a player or playing the selections on said discs and for reading encoded information of the starting time, ending time and elapsed playing time of each  
5 selection on the disc, user operated selecting means adapted to be enabled to permit a user to select recordings to be played by said player, money responsive means normally enabling said selecting means, means for recording the number of times a selected disc could not be read by the player together with the identity of the disc, means responsive to the starting time of a disc for generating a real elapsed time  
10 signal, means for comparing said real elapsed time signal with an apparent elapsed time signal corresponds to a time which is greater than a first predetermined number, means for cancelling a selection when the difference between said real elapsed time signal and said apparent elapsed time signal corresponds to a second predetermined time which is greater than said first predetermined time, means for recording the  
15 number of cancellations for each selection and means for reading said recording means.

23. An automatic phonograph as in Claim 22 including means for registering selection switch have been made by said selecting means, means for erasing from said registering means selections as they are played, said phonograph adapted to be turned  
20 on and off, and means responsive to the passage of a predetermined time interval after said phonograph has been turned off for erasing from said registering means selections which have been made but not yet played.

24. An automatic phonograph as in Claim 22 including settable means for automatically enabling said selecting means independently of said money-responsive  
25 means and means for setting said settable means to permit a user free plays at predetermined times.

25. An automatic phonograph as in Claim 22 including automatic means adapted to be activated to cause said playing means to play selections independently of said selecting means and said money-responsive means, and means for activating said  
30 automatic means for a predetermined limited period of time.

26. An automatic phonograph as in Claim 22 including settable means for automatically enabling said selecting means for automatically enabling said selecting means independently of said money-responsive means, means for setting said settable means to permit a user free plays at predetermined times, automatic means adapted to

be activated to cause said playing means to play selections independently of said selecting means and said money-responsive means and means for activating said automatic means for a predetermined limited period of time.

27. An automatic phonograph as in Claim 26 in which said setting means and said  
5 activating means comprise a common real time clock for permitting said settable means and said automatic means to be set for predetermined hours of predetermined days of the week.

28. An automatic phonograph as in Claim 22 including means for registering  
10 selections which have been made by said selecting means, means for erasing from said registering means selections as they are played, said phonograph adapted to be turned on and off, means responsive to the passage of a predetermined time interval after said phonograph has been turned off for erasing from said registration means selections which have been made but not yet played, settable means for automatically  
15 enabling said selecting means independently of said money-responsive means, automatic means adapted to be activated to cause said playing means to play selections independently of said selecting means and said money-responsive means and means comprising a real time clock for recording the times of occurrence of said skips and cancellations and for setting said settable means to permit a user free plays at predetermined times and for activating said automatic means for a predetermined  
20 limited time.

30. The apparatus of Claim 2 in which said phonograph is adapted to play selections from tracks of a number of discs, further including means for recording the disc and track number corresponding to said skip and said cancellation and means for reading the stored information.

25 31. The apparatus of Claim 30 in which said recording means is adapted to store the time of occurrence of said skip and the time of occurrence of said cancellation of a selection.

32. In an automatic phonograph having a compact disc player adapted to read  
30 from a compact disc encoded information as to the starting time, ending time, and reported elapsed playing time of each selection on the disc, apparatus comprising:  
means responsive to starting a selection for generating a measured elapsed time signal  
synchronized with a reported elapsed time signal read from the disc;

means for comparing said measured elapsed time signal with said reported elapsed time signal;

means responsive to said comparing means for recording a skip when the difference between said measured elapsed time signal and said reported elapsed time  
5 signal is greater than a predetermined amount; and

means for resynchronizing said measured elapsed time signal to correspond with said reported elapsed time signal upon the occurrence of said skip so that subsequent skips can be detected and recorded.

33. The apparatus of claim 32 including means for cancelling a selection when the  
10 difference between said measured elapsed time signal and said reported elapsed time signal corresponds to a second predetermined amount which is greater than said first-named predetermined amount.

34. The apparatus of claim 32 including means responsive to said recording means for cancelling a selection when a number of said skips exceeds a predetermined  
15 number.

35. The apparatus of claim 32 including first means for cancelling a selection when said measured elapsed time signal differs from said reported elapsed time signal by an amount corresponding to a second predetermined amount which is greater than said first-named predetermined amount, means for recording the number of said skips,  
20 and second means responsive to said recording means for cancelling a selection when the number of said skips exceeds a predetermined number.

36. The apparatus of claim 35 including means for changing said predetermined amounts and said predetermined number.

37. The apparatus of claim 35 in which said phonograph is adapted to play  
25 selections from tracks of a number of discs, said recording means recording the disc and track number corresponding to said skips and cancellations and means for reading the stored information.

39. A method for controlling an automatic phonograph having a compact disc player adapted to read from a compact disc encoded information as to the starting  
30 time, ending time, and reported elapsed playing time of each selection on the disc, comprising the steps of:

generating a measured elapsed time signal synchronized with a reported elapsed time signal read from the disc at the start of a selection;

comparing said measured elapsed time signal with said reported elapsed time signal;

recording a skip when the difference between said measured elapsed time signal and said reported elapsed time signal is greater than a predetermined amount;

5 and

resynchronizing said measured elapsed time signal to correspond with said reported elapsed time signal upon the occurrence of said skip so that subsequent skips can be identified and recorded.

40. The method of claim 39, further comprising the step of cancelling a selection  
10 when the difference between said measured elapsed time signal and said reported elapsed time signal corresponds to a second predetermined amount which is greater than said first-named predetermined amount.

41. The method of claim 39, further comprising the step of cancelling a selection when a number of said skips exceeds a predetermined number.

15 42. The method of claim 39, further comprising the steps of:

cancelling a selection when said measured elapsed time signal differs from said reported elapsed time signal by an amount corresponding to a second predetermined amount which is greater than said first-named predetermined amount;  
and

20 cancelling a selection when the number of said skips exceeds a predetermined number.

43. The method of claim 42, further comprising the step of changing said predetermined amounts and said predetermined number.

44. The method of claim 42 in which said phonograph is adapted to play  
25 selections from tracks of a number of discs, the step of recording further comprising recording the disc and track number corresponding to said skips and cancellations, and further comprising the step of reading the stored information.

46. In an automatic phonograph having a compact disc player adapted to read from a compact disc encoded information as to the starting time, ending time, and  
30 reported elapsed playing time of each selection on the disc, an apparatus comprising:

a decoder in the compact disc player providing said reported elapsed playing time read from the disc;

a clock that generates a measured elapsed time synchronized with said reported elapsed playing time at the start of a selection;



a processor that compares said measured elapsed time with said reported elapsed playing time; and

- 5 a recorder that records a skip when the difference between said measured elapsed time and said reported elapsed playing time is greater than a predetermined amount, said processor resynchronizing said measured elapsed time to correspond with said reported elapsed playing time upon the occurrence of said skip so that subsequent skips can be detected and recorded.